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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,857	08/31/2001	Jei-Fu Shaw	08919-066001 / 09A-900517	2196

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EXAMINER	
NASHED, NASHAAT T	

ART UNIT	PAPER NUMBER
1652	

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/943,857	SHAW ET AL.	
	Examiner	Art Unit	
	Nashaat T. Nashed, Ph. D.	1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) *33-35* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6, 12, 18, 25, 31 and 32* is/are rejected.

7)☒ Claim(s) *1-5,7-11,13-17,19-24 and 26-30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The application has been amended as requested in the communication filed February 18, 2005. Accordingly, claims 1 and 26 have been amended.

Claims 6, 12, 18, 31, and 32 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 6, 12, 18, and 32 are drawn to a *Candida rugosa* lipase of SEQ ID NO: 4, but SEQ ID NO: 4 is not a wild-type *C. rugosa*, see the specification on page 14, lines 6-8. Thus, claims 6, 12, and 18 improperly dependent directly or indirectly on claim 1, which is limited to the wild-type lipase. Similarly, claim 32 is improperly dependent on claim 26 because claim 26 is limited to the wild-type lipases.

Applicants have amended the specification and argue that they have understood the confusion of the examiner and contended that the amendment to the specification clarifies the miss understanding.

Applicants' arguments filed 2/18/05 have been fully considered, but they are found unpersuasive. The phrase "the amino acid sequence of the *Candids rugosa* lipase" means a lipase, which is found and can be purified from *C. rugosa*, i.e., wild-type lipase. SEQ ID NO: 4 is neither found nor could be purified from *C. rugosa*. SEQ ID NO: 4 is a mutant of a wild-type lipase, and thus, expands the scope of the claim from which it depends.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 7-11, 13-17, 19-24, and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bocca *et al.* (IDS reference: Prot. Sci 1998, 7, pp 1415-1422) or WO 99/14338 ('338, IDS reference) in view of Lotti *et al.* (IDS reference: Gene 1993, 124, pp. 45-55), and Ge *et al.* (IDS reference: BioTechniques 1997, 22, 28-29) for the reasons set forth in the prior Office action mailed October 14, 2004.

In response to the above rejection, applicants argue that Bocca *et al.* were not successful in making a construct containing 8 universal serine codons substitution for CTG codons in the wild type. Also, they argue that Lotti teaches molecular cloning and

characterization of three CRL genes without mentioning of a functional CRL protein and Ge teaches site directed mutagenisis to simultaneously introduce 3 cat- and 6-lacI-related mutations.

Applicants' arguments filed 2/18/05 have been fully considered, but they are found unpersuasive. Obviously, the examiner agrees with the applicants in that none of cited references teach the claimed invention because the rejection is made under 35 USC 103. Regarding applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Contrary to the applicants' arguments, Ge *et al.* provide an important teaching of simultaneously mutating several codone in the same time, which is the state of the art at the time of inventions. The examiner has taken the position that any nucleic acid sequence thought by one of ordinary skill in the art can be made or modified by chemical or biological means including the methods disclosed by Ge *et al.* The ordinary skill in the art would have had great confidence in his ability and expectation of success to make said nucleic acid regardless of the difficulties mentioned by Bocca *et al.* Applicants' allegation that Bocca *et al.* were unsuccessful in making a construct containing 8 universal serine codons substitution for CTG codons in the wild type is unfounded and lacks support in the prior art. The fact that it is not described in their prior art does not mean they have tried and failed.

Given the facts that the CTG codon is read as serine instead of leucine in *C. rugosa* and the active site serine is encoded by a CTG codon, one of ordinary skill in the art would have known at the time of invention that the heterologus expression of CRL in common host cells such as *E. coli* and yeast would produce inactive protein because every CTG codon would be read leucine instead of serine including the active site serine. As stated in the prior Office action mailed 10/14/04, and undisputed by the applicants, the ordinary skill in the art would have been motivated to make the CRL in large quantities at the time of invention to use in the hydrolysis and synthesis of wide range of esters. The state of the art described above would have allowed the ordinary skill in the art to replace all the CTG codons with universal serine codons in order to obtain an authentic CRL with all its desired native physicochemical properties. Thus, the claims remain rejected for reasons set forth above.

Claims 6, 12, 18, and 31 remain objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

No claim is allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nashaat T. Nashed, Ph. D. whose telephone number is 571-272-0934. The examiner can normally be reached on MTTF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nashaat T. Nashed, Ph. D.
Primary Examiner
Art Unit 1652